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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/592,179	06/12/2000	Peter Gerber	80058-004800US	5364

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EXAMINER

NGUYEN, NAM V

ART UNIT PAPER NUMBER

2635

DATE MAILED: 07/14/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/592,179

Applicant(s)

GERBER ET AL.

Examiner

Nam V Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 April 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 April 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

This communication is in response to applicant's response to amendment B which is filed April 29, 2003.

An amendment to the claims 1-9 have been entered and made of record in the application of Gerber et al. for an "interrogation and responder system for identifying a target" filed June 12, 2000.

Claims 1-9 are pending.

Response to Arguments

The corrected or substitute drawing were received on April 29, 2003. These drawing are accepted. Applicant is advised to submit new formal drawings including changes required by the proposed drawing correction filed on April 29, 2003, which has been approved by the examiner.

Applicant's amendment and arguments with respect to claims 1-9, filed April 29, 2003 have been fully considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

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having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-3 and 7-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over D'Isepo et al. (US# 5,583,507) in view of Fullerton (US# 5,687,169).

Referring to claim 1, D'Isepo et al. disclose an interrogation system (column 2 lines 6 to 12; See Figures 1 and 5) comprising a transmitting device (40; see Figure 5) which transmits an inquiry (125) (i.e. a side band signal) to a responder device (10) (i.e. an identification of friend vs. foe) in the form of electromagnetic field radiation (column 2 lines 13 to 39; column 9 lines 3 to 23) in order to transmit coded information (i.e. a new code) (column 9 lines 59 to column 10 lines 25),

A responder device (10) having has sensor (65) (i.e. dipole antenna) for detecting such electromagnetic radiation (column 5 lines 19 to 30; see Figure 4a), an evaluation unit (71) (i.e. microprocessor) for processing such detected pulses (column 5 line 65 to column 6 line 8) and a transmitter (i.e. reflected signal back) for sending back a response to the transmitting device's inquiry (125),

Wherein said transmitting device (40) further contains a transmitting device sensor (140) (i.e. processor) for detecting a response from said responder device (10) (column 9 lines 24 to 49; see Figure 5).

However, D'Isepo et al. did not explicitly disclose a transmitting device transmits to a responder device in the form of directionally specific single electromagnetic pulses or short

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bursts of electromagnetic pulses which are staggered with different distances between said pulses or short bursts of pulses.

In the same field of endeavor of communication system, Fullerton teaches that a transmitting device (902) (transceiver 1) transmits to a responder device (912)(i.e. transceiver 2) (column 11 lines 43 to 64; see Figure 9) in the form of directionally specific single electromagnetic pulses (column 5 lines 13 to 27; column 13 line 50 to column 14 line 4; see Figure 17) or short bursts of electromagnetic pulses which are staggered with different distances between said pulses or short bursts of pulses in order to transmit and receive impulse radio signal pulses for pulse interleaved communications.

One of ordinary skilled in the art recognizes the need to transmit a directionally specific single electromagnetic pulses of Fullerton in the transmitting an unique electromagnetic energy of D'Isepo et al. because D'Isepo et al. suggest it is desired to provide that a remote transmitter can be provided to direct the electromagnetic energy to the receiver interpret the unique spatial, polarized, frequency selective and angular characteristics of the retro-reflective pattern (column 2 lines 39 to 47) and Fullerton teaches that an impulse radio transceiver transmits an propagating electromagnetic pulses to another impulse radio transceiver (column 13 line 50 to column 14 line 40) in order to avoid self interference between the transmitted impulse radio signal pulses and received impulse radio signal pulses. Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention was made to transmit a directionally specific single electromagnetic pulses of Fullerton in the transmitting an unique electromagnetic energy of D'Isepo et al. with the motivation for doing so would have been to provide a secure and

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reliable transmissions signal of a passive identification of friend vs. foe apparatus in order to avoid potentially disastrous effect.

Referring to claim 2, D'Isepo et al. in view of Fullerton disclose the interrogation system in accordance with claim 1, D'Isepo et al. disclose wherein said transmitting device (40) has a control circuit (140) (i.e. processor) and an antenna (120) for transmitting its inquiry signals (125) (column 8 lines 52 to 67; see Figure 5).

Referring to claim 3, D'Isepo et al. in view of Fullerton disclose the interrogation system in accordance with claim 2, D'Isepo et al. disclose wherein the antenna (65; see Figure 4a) is integrated into said control circuit (65 and 69) (column 5 line 65 to column 6 line 8).

Referring to claim 7, D'Isepo et al. in view of Fullerton disclose the interrogation system in accordance with claim 1, Fullerton discloses wherein sensor (1726) (i.e. antenna) of the responder device (908) (i.e. transceiver 2) is designed to be received in a portable harness system (i.e. a portable ultrawide-band communications) (column 4 lines 35 to 43).

Referring to claim 8, D'Isepo et al. in view of Fullerton disclose the interrogation system in accordance with claim 1, D'Isepo et al. disclose wherein at least a part thereof (20) can be integrated into a weapon (i.e. combat aircraft; see Figure 1) (column 3 lines 48 to 67).

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Referring to claim 9, D'Isepo et al. in view of Fullerton disclose the interrogation system in accordance with claim 1, Fullerton discloses wherein said responder device (908) (see Figure 9) includes an antenna (1726; see Figure 17) for receiving said electromagnetic pulses from said a transmitting device (902) (column 5 lines 13 to 27; column 13 line 50 to column 14 line 4).

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over D'Isepo et al. (US# 5,583,507) in view of Fullerton (US# 5,687,169) as applied to claim 1 above, and further in view of Fuchter et al. (US# 6,140,982).

Referring to claim 4, D'Isepo et al. in view of Fullerton disclose the interrogation system in accordance with claim 1, however, D'Isepo et al. in view of Fullerton did not explicitly disclose wherein said directional specificity is achieved with an angle of a radiated lobe below 50 mrad.

In the same field of endeavor of identifying a target as a friend or foe system, Wagner teaches that directional specificity is achieved with an angle of a radiated lobe below 50 mrad (i.e. a maximum of 10 degree cone angle) (column 4 lines 10 to 22) in order to avoid a discovery of the interrogator.

One of ordinary skilled in the art recognizes using the directional specificity is achieved with an angle of a radiated lobe below 50 mrad of Fuchter et al. in the electromagnetic energy radiation of the interrogator of D'Isepo et al. in view of Fullerton because directional specificity is achieved with an angle of radiated lobe below 50 mrad would improve the reliable and secure

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of the transmitted signal from an interrogator that has been shown to be desirable in the passive identification of friend vs. foe apparatus.

Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over D'Isepo et al. (US# 5,583,507) in view of Fullerton (US# 5,687,169) and Fuchter et al. (US# 6,140,982) as applied to claim 4 above, and further in view of Udd et al. (US# 5,091,917).

Referring to claim 5, D'Isepo et al. in view of Fullerton and Fuchter et al. disclose the interrogation system in accordance with claim 4, however, D'Isepo et al. in view of Fullerton and Fuchter et al. did not explicitly disclose wherein said responder generates staggered information pulses with different distances between said pulses corresponding to said staggered transmitting device pulses.

In the same field of endeavor of transmitting pulses by a signal source, Udd et al. teach that responder generates staggered information pulses with different distances between said pulses corresponding to said staggered transmitting device pulses (column 5 line 19 to column 6 line 34; see Figure 4) in order to create a periodic pulse train of difference in arrival time.

One of ordinary skilled in the art recognizes generating staggered information pulses with different distances between pulses of Udd et al. in the electromagnetic pulses of the interrogator of D'Isepo et al. in view of Fullerton and in further view of Fuchter et al. because generating staggered information pulses with different distances between pulses would improve the difficulty of recognizing the transmitted signal from an interrogator that has been shown to be

desirable in the passive identification of friend vs. foe apparatus of D'Isepo et al. in view of Fullerton and in further view of Fuchter et al.

Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over D'Isepo et al. (US# 5,583,507) in view of Fullerton (US# 5,687,169) as applied to claim 1 above, and further in view of Wagner (US# 5,130,713).

Referring to claim 6, D'Isepo et al. in view of Fullerton disclose the interrogation system in accordance with claim 1, however, D'Isepo et al. in view of Fullerton did not explicitly disclose wherein said transmitting device can perform a distance measurement using the response signal received from said responder device.

In the same field of endeavor of identifying a target as a friend or foe, Wagner teaches that transmitting device (i.e. an interrogation device; see Figure 1) can perform a distance measurement using the response signal received from said responder device (i.e. an answering device; see Figure 2) (column 4 lines 8 to 33; column 6 lines 17 to 30).

One of ordinary skilled in the art recognizes using the reply signal of the reply transmitter to determine a distance measurement of Wagner in the passive identification of friend vs. foe system of D'Isepo et al. in view of Fullerton because D'Isepo et al. suggest it is desired to provide that encoder/controller can be readable at a long distance in any environment (column 2 lines 6 to 12) and the interrogator can be located at any distance from the person or object to be identified (column 8 lines 52 to 61) and Fuchter et al. teach that the transit time determination within the framework between the HF transmitting device and the HF receiving device to

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determine the distance measurement (column 6 lines 17 to 30). Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention was made to use the reply signal of the reply transmitter to determine a distance measurement of Wagner in the passive identification of friend vs. foe system of D'Isepo et al. in view of Fullerton with the motivation for doing so would have been to provide a useful information of a distance measurement between an interrogator and a transponder for the identification friend or foe system.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nam V Nguyen whose telephone number is 703-305-3867. The examiner can normally be reached on Mon-Fri, 8:00AM - 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Horabik can be reached on 703-305-4704. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9314 for regular communications and 703-872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

Nam Nguyen
July 3, 2003



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